

**Joint Management Plan Review (JMPR)
Cordell Bank, Gulf of the Farallones, and
Monterey Bay National Marine Sanctuaries**

Draft Work Plan - 10/8/2002

Introduction

Joint Management Plan Review

Management plans are sanctuary-specific planning and management documents that describe the objectives, policies, and activities for a sanctuary. They generally outline regulatory goals, describe boundaries, identify staffing and budget needs, set priorities and performance measures for resource protection, research and education programs. Management plans also guide the development of future management activities.

The National Marine Sanctuary Program (NMSP) is required by law to periodically review sanctuary management plans to ensure the sanctuary sites continue to best conserve, protect, and enhance their nationally significant living and cultural resources. Cordell Bank, Gulf of the Farallones and Monterey Bay National Marine Sanctuaries each have their own management plan, but they are between 10 – 20 years old and have not been updated. Recent scientific discoveries, advancements in managing marine resources, and new resource management issues may not be adequately addressed in these existing plans.

The NMSP is reviewing all three management plans jointly. These sanctuaries are located adjacent to one another, managed by the same program, and share many of the same resources and issues. In addition, all three sites share many overlapping interest and user groups. It is also more cost effective for the program to review the three sites jointly rather than conducting three independent reviews. Using a community-based process that will continue to provide numerous opportunities for public input, the NMSP will determine whether current issues and threats to the resources are the same as when the initial management plan was developed, and whether the management plan put in place at that time is protecting sanctuary resources. The review will also evaluate management strategies, regulations and boundaries.

Purpose of Work Plan

This work plan identifies how the National Marine Sanctuary Program (NMSP) will address priority management issues during the development of the draft Sanctuary Management Plan. A Sanctuary Management Plan is generally comprised of issue-specific action plans outlining activities and programs to be implemented over the next five years. NMSP staff will develop these action plans to address priority site-specific and cross-cutting issues with public input. Some issues may first be addressed by an internal team, comprised of NMSP staff, that will analyze the issue and develop recommendations for each Sanctuary Advisory Council (SAC) to consider. For other issues, working groups, comprised of staff, SAC members and subject experts, will be established to further characterize the issue and develop specific strategies to address the issue. The recommendations of these working groups will be presented to each site-specific SAC or all three SACs for cross-cutting issues. All SAC and working group meetings are open to the public. The locations and times of these meetings will be posted on the JMPR website (<http://www.sanctuaries.nos.noaa.gov/jointplan/>). NMSP staff welcome input on this draft work plan and the next steps in the management plan review process.

Identification and Prioritization of Issues

The NMSP selected the issues to be addressed in the joint management plan review following an extensive public process of scoping and issue prioritization. The NMSP held 20 scoping meetings between November 2001 and January 2002, and received over 12,500 comments. These comments were summarized in a *Summary Scoping Report (February 25, 2002)* from which Advisory Council members representing the three sanctuaries selected their highest priority issues to be addressed in the review.

Through a series of workshops in April 2002, Advisory Council members provided feedback and recommendations on which resource issues should be addressed, the resources necessary to address the issue, and the strategies or methods with which to proceed. The results from the workshop were published in a document titled *Report on Sanctuary Advisory Council Prioritization Workshops (May 13, 2002)*.

Based on input from the Advisory Councils and the local staff input, JMPR staff selected priority issues to address in the JMPR. These issues are identified and described in the July 8, 2002 document, *Selection of Priority Issues to be addressed in the Joint Management Plan Review*. These documents are available for viewing on the JMPR website (<http://www.sanctuaries.nos.noaa.gov/jointplan/>). Although some issues have been modified, they still reflect a majority of the priorities of the SACs.

Next Steps

This work plan provides a blueprint or guide as to how the draft management plan will be developed over the next eight to ten months. The first step is to establish and convene the SAC working groups and internal staff teams. They will be provided direction on process, a description of the issues and what is expected in terms of a product or recommendation. The groups may also help draft a recommended plan of action for inclusion in the management plan. As internal teams and working groups develop action plans over the next six to eight months, each plan will be presented to the SACs for comment. JMPR staff will then assemble the specific action plans for the draft management plan; develop the supporting environmental and socioeconomic documents; and release the draft management plans for public review.

Cross-Cutting Introduction

The JMPR involves the simultaneous review of three adjacent sanctuaries in northern-central California. Many of the key issues raised during the public scoping meetings apply to two or more sanctuaries. Likewise, many of the sanctuary users, state and federal agencies, and stakeholder groups have interests in more than one sanctuary. Broadly defined, those issues that apply to two or more sanctuaries are considered cross-cutting. However, not all issues that are cross-cutting in nature will be addressed as cross-cutting. The NMSP recognizes that the complexity, time, and resources required to address cross-cutting issues greatly increases as the number of sites increase. In addition, some of the actual strategies for addressing cross-cutting issues may be better accomplished at an individual sanctuary, which may establish a model for other sanctuaries to adopt. In order to increase cooperation and coordination among the sites, the NMSP has identified the following seven priority issues as cross-cutting:

- Administration
- Boundary Issues
- Community Outreach
- Cultural Resources
- Ecosystem Monitoring
- CB/GFNMS Education
- Fishing

Issue Name: Administration

Issue Description:

Cordell Bank, Gulf of the Farallones and Monterey Bay National Marine Sanctuaries are located adjacent to one another along a 350-mile stretch of the north-central California coast. Managed by the same national program, they share many of the same resources and issues, and have some overlapping interest and user groups. There are many opportunities for these sites to work cooperatively, share assets, and address resource management issues in a coordinated manner.

The three sanctuaries continue to coordinate on many important resource management issues, such as oil spills and volunteer monitoring. However, for the most part each site is managed independently of the others. The sanctuaries have separate administrative staffs, Sanctuary Advisory Councils, education, research and resource protection programs.

The NMSP has placed a high priority on developing mechanisms and strategies for improved, consistent and efficient management across all three sites, particularly as it relates to education, research, regulations, and enforcement. There is also a need to develop an overarching mechanism to address current and emerging cross-cutting issues within the program. The goal of this team is to develop a strategy for these three sites to operate as three complementary components of a national system.

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Bill Douros, MBNMS

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Internal Team Meetings: The facilitator will meet individually with the Gulf of the Farallones/Cordell Bank manager and the Monterey Bay superintendent to determine some of the opportunities and obstacles to cooperative management. She will then broaden her inquiry to other staff at each of the three sanctuaries. Following this analysis the team will meet as a group to determine the range of specific strategies needed to address this in the management plan.

Timeline: November 1, 2002 - January 15, 2003

Outcomes and Products:

- Develop procedures and protocols targeting better protection of sanctuaries' resources through coordinated education, research and resource protection (including enforcement) programs
- Create strategies reflective of and responsive to the needs of various local communities
- Design strategies to maximize administrative efficiency

Issue Name: Boundary Issues**Issue Description:****Issue 1:**

Since designation in 1992, the northern portion of the Monterey Bay National Marine Sanctuary has been under co-management with the Gulf of the Farallones National Marine Sanctuary. Despite continued efforts to implement a shared management structure, this arrangement has been only moderately successful and has resulted in confusion with some communities as to which site is ultimately responsible for managing and protected the resources in this area. The NMSP received many comments throughout the public scoping period and the SAC prioritization workshops requesting that the program resolve the ongoing northern MBNMS/southern GFNMS boundary issue in the joint management plan review (JMPR).

Phase 1: The National Marine Sanctuary Program will first assemble an internal team of NMSP staff to analyze the administrative, ecological, physical, and socioeconomic factors and determine whether there is a need to modify the existing sanctuary boundaries. Other administration and management scenarios between the Monterey Bay and Gulf of the Farallones NMSs will also be explored. The analysis will provide a basis for determining a range of boundary or administrative structures that will promote maximum efficiency in engaging local communities and protecting sanctuary resources.

Phase 2: Upon the completion of the internal team's analysis and recommendations, both of the GFNMS and MBNMS SACs will be presented the results and provided the opportunity to provide input on the range of recommendations and alternatives prior to any final decision being

made.

Issue 2:

In conjunction with the GF/MB boundary issue, the internal team will review the existing San Francisco/Pacifica exemption area in the northern region of the MBNMS. This area was not included by NOAA as part of the original MBNMS Sanctuary designation in 1992 due to concerns regarding contamination from the San Francisco Municipal combined sewer overflow discharge plume and the Golden Gate dredge disposal area. The team will also provide an analysis of the issue and determine whether the area should be included for sanctuary protection or remain outside the boundary.

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Dan Basta, NMSP	Ed Lindelof, NMSP
Brady Phillips, NMSP	
External ecosystem/biogeographic experts (1-2)	

Internal Team Meetings: TBD

Timeline: October 2002 - February 2003

Outcomes and Products:

- Define criteria to evaluate boundary issues
- Develop a framework to guide development and selection of boundary alternatives
- Define boundary and administration alternatives and justification for each alternative
- Identify a preferred alternative

Issue Name: Community Outreach**Issue Description:**

An informed local, regional and national constituency to enhance sanctuary stewardship is a high program priority. Outreach efforts will focus on building public awareness and understanding of the significance of the sanctuaries and the need to protect their cultural and natural resources. Outreach efforts are primarily conducted by staff as part of resource protection, education and research programs, or by SAC members. Additionally, a coordinated student education program is being developed under "Education"; these two efforts will work in tandem to enhance public awareness and stewardship of all three sanctuaries.

Currently, the three sanctuaries lack a coordinated outreach program effectively highlighting the national system or specific program activities across all three sites. Such an effort will involve all three sites working towards better coordination and collaboration. All three sites have expressed a desire to develop a cross-cutting outreach action plan as it supports the broader NMSP goal in

developing public awareness of the Sanctuaries. To accomplish this, the sites need to implement regional outreach strategies, and increase marketing and media exposure efforts, while continuing to focus on site-specific needs and targeted audiences.

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Working Group Participants:

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Amity Wood, FMSA

Dawn Hayes, MBNMS

Joe Smith, CBNMS SAC

Brenda Donald, GFNMS SAC

Dennis Long, MBSF

Working Group Meetings: Nov, Jan, Mar

Timeline: November 2002 - March 2003

Outcomes and Products:

- Develop a regional strategic community outreach plan that includes:
 - Outreach needs assessment and gap analysis
 - Identification of topics to be covered and related key messages, talking points
 - Identification of target audiences
 - Strategies to communicate key messages, including media opportunities
 - Strategies to ensure coordination across all three sites

Issue Name: Cultural Resources**Issue Description:**

Submerged cultural resources are an important part of our nation's maritime heritage and their protection is a mandate of the National Marine Sanctuaries Act. The National Marine Sanctuary Program has attempted to fully characterize these resources by assembling a database of known shipwrecks along the West Coast. The NMSP needs to develop strategies to define, identify, locate, characterize, and protect the cultural resources within its boundaries – from shipwrecks to archeological sites and artifacts. A component of the submerged cultural resources program will be to identify potential resource threats from sunken vessels (e.g. recent oil releases from the *Luckenbach*, or potential releases from the *Montebello*).

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Working Group Meetings: TBD**Timeline:** November 2002 - March 2003**Outcomes and Products:**

- Develop strategies to identify, locate and characterize and protect cultural resources (vessels, aircraft, archaeological sites & artifacts)
 - Identify shipwrecks that may pose threats to marine resources (oil leaks, hazards, etc.) and outline approach to reducing threats.
 - Create an integrated cultural resources interpretive strategy to promote public awareness
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Issue Name: Ecosystem Monitoring**Issue Description:**

Effective resource management requires statistically robust and relevant data sets from long-term monitoring to evaluate the status and trends of natural resources, physical properties, and human activities. Monitoring programs should provide timely information to assess environmental change with respect to management issues implemented by the sanctuary. Data from monitoring programs should also be used to develop predictive models to better anticipate change or impacts over time.

Each of the sanctuaries has ongoing monitoring activities designed to address resource management concerns that have been identified since site designation. GFNMS is involved in several marine mammal and seabird monitoring programs, as well as shoreline, intertidal, coastal ecology, and restoration monitoring. CBNMS shares marine mammal and seabird monitoring efforts with the GFNMS. CBNMS also focuses monitoring activities on the zooplankton communities, feeding grounds, larval recruitment, and participates in a multi-agency Ecosystems Dynamic Study (What is the

MBNMS has recently established its Sanctuary Integrated Monitoring Network (SIMoN). This program creates a stable network of ecosystem and issue-based monitoring data to address the critical need for long-term evaluation of the region and resources. The basic goals of SIMoN are to 1) integrate existing monitoring conducted in the MBNMS, 2) initiate basic surveys or characterizations of all habitats and regions of the MBNMS, and specific, hypothesis-driven monitoring efforts of fixed duration; 3) establish and maintain a series of essential long-term monitoring efforts that will continue into the future; and 4) disseminate timely and pertinent information to resource managers and decision makers, the research community, educators, and the general public.

The joint management plan review process provides a unique opportunity to enhance management-based monitoring strategies for the three individual sanctuaries and to design an ecosystem monitoring network strategy to coordinate targeted activities among sites. Ecosystem monitoring efforts may address management issues that transcend the boundaries of an individual sanctuary, such as water quality, invasive species, and acoustic impacts. The strategy to address these shared concerns will form the basis for a cross-cutting action plan to coordinate monitoring efforts, institutional partners, and volunteer activities among the sanctuaries. This

approach will improve efficiency and effectiveness of these monitoring activities and provide more comprehensive information to resource managers involved in decision-making across all three sites.

In the past year the National Marine Sanctuary System (NMSS) has undertaken a process to develop a framework for system-wide monitoring. The framework is intended to provide a standardized approach to conduct monitoring activities necessary to address their resource management concerns. The framework also serves as a tool to enable systematic reporting and promote monitoring coordination among sanctuaries. The approach for system-wide monitoring will be coordinated with the joint management plan review process and the development of site-specific, resource management-based monitoring strategies and an ecosystem monitoring network strategy for activities at all three of the sanctuaries.

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Gwen Heistand, GFNMS SAC	James Kelley, GFNMS SAC
Andrew DeVogelaere, MBNMS	MBNMS SAC Representative
Steve Lonhart, SIMoN Scientist	Other pertinent regional experts (TBD)
Shannon Lyday, FMSA	Chris Harrold, Monterey Bay Aquarium
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Working Group Meetings:

Dec-Jan 2003: Subgroup meetings—Assess monitoring activities and requirements for each sanctuary

February 2003: Working Group Meeting—Identify targeted areas for coordination and strategy development for ecosystem monitoring network.

Related Activities:

Oct./Nov. 2002	Pilot implementation of NMSP System-wide Monitoring Program (CINMS)
December 2002	NMSP System-wide Monitoring Expert Panel Meeting—Plan Implementation
March 2003	West Coast Sanctuary Volunteer Monitoring Workshop

Timeline: October 2002 - April 2003

Outcomes and Products:

- Develop site-specific, resource management based monitoring strategies for each sanctuary
- Design implementation plan for SIMoN at MBNMS
- Develop ecosystem monitoring network strategy for targeted regional coordination
- Create strategies to report and interpret monitoring data for public information and resource management applications

Issue Name: Fishing**Issue Description:**

Fish are an essential component of the marine ecosystem. Marine mammals and seabirds rely on fish as a primary food source. Fish may also be prey for other fish, and in turn prey upon other species in the food web. The health of the ecosystem reflects this dynamic equilibrium of predator and prey, and is influenced by global and regional oceanographic conditions, pollution, habitat destruction, and natural perturbations and harvesting by humans.

Fishing is an important part of the northern-central California's culture and economy. Over 1,000 commercial vessels fish annually in the region, along with thousands of recreational fishermen. Clams and oysters are also harvested in certain estuaries, as well as invertebrates from the intertidal zone. In total, over 200 species are caught across all three sanctuaries using the following gear types: pots, traps, purse seines, haul-nets, gillnets, trammel nets, hook and line, long lines, mid-water and bottom trawls. Although some stocks are healthy and support a viable commercial and/or recreational fishery, there are many fish stocks that are in decline or classified as over fished.

During the public scoping process sanctuary staff received many comments concerning the impacts of fishing activities on sanctuary resources and habitats, and the questioned the role of the National Marine Sanctuary Program in addressing these issues. The public was particularly concerned about the impacts of destructive fishing practices and gear types. Fisherman also expressed concern about the NMSP having more control over fishery regulations or becoming another fishery manager. At a joint issue prioritization workshop, the three Sanctuary Advisory Councils recommended that the NMSP clarify its role and relationship with other fishery management agencies in order to effectively address some of the concerns about fishing activities on sanctuary resources.

Currently the management of commercial and recreational fisheries in California is the responsibility of the California Department of Fish and Game (DFG) in state waters (typically 0-3 nautical miles from shore), and the Pacific Fishery Management Council (PFMC) and National Marine Fisheries Service (NMFS) in federal waters (3 to 200 nautical miles). In contrast, the NMSP does not directly manage specific fisheries; however, it does have an ecosystem protection mandate that gives it authority to manage human uses that impact sanctuary resources.

This issue will be addressed in two phases. Phase I will establish an internal team to clarify the NMSP policy on how the program works with other agencies to address fishing activities that impact sanctuary resources. The group will also review the NMSP policy regarding zoning and clarify when and how the program may consider the use of marine reserves as a tool to address impacts from fishing and the protection of biodiversity.

Phase II will establish site-specific working groups to address local fishery related issues with input from the SAC and the public. These groups will use the products and positions developed in Phase I as a guide and are specifically described in the "Ecosystem Protection" section under each site.

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Margo Jackson, NMSP

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Internal Team Meetings: 1 meeting, 2 Conference calls

Timeline: October 2002 - January 2003

Outcomes and Products:

- Clarify NMSP policy on its role in fisheries issues, including clarifying the program's relationship with other state and federal fishery management agencies. Clarify NMSP policy on the role of marine reserves in sanctuaries and specific criteria as to when and how marine reserves will be pursued as a management tool.
- Establish site-specific external working groups to address local fishery related issues with input from the SAC and the public. These groups will use the policies developed in Phase I as a guide and are referenced under "Ecosystem Protection" for each site.

Monterey Bay Site Specific Issues

Issue Name: Administration

Issue Description:

MBNMS will address administrative issues such as identifying staffing and infrastructure resource needs, minor boundary and regulatory corrections, and permit-processing improvements. Minor boundary adjustments include addressing entrances to river mouths where the mean high tide line is not clearly delineated and entrances to harbors where fixed points provide a clearer delineation than the COLREG line at harbor mouths. Specifically some issues include clarifying the shoreward boundary-line across the entrances to annual and seasonal streams and lagoons, including the shoreward boundary for Elkhorn Slough and that part of Pescadero Marsh that is included within Sanctuary boundaries. This would also require altering the boundary at Santa Cruz Harbor to include the coastline between Pt. Santa Cruz and the West Small Craft Harbor Jetty tip within the Sanctuary. Discussion of potential boundary modifications to include Davidson Seamount can be found in Ecosystem Protection – Davidson Seamount.

Permit process improvements include examining ways to streamline the permit process without sacrificing protection of the resources. Some regulatory corrections may involve adding definitions or adding administrative guidelines for response actions or review of coastal development patterns (i.e. tracking and commenting on other agency land use actions). Another objective will be to develop a comprehensive operations program that identifies staffing and other resources necessary to adequately implement all programs identified in the management plan. The need for different office locations and staffing dispersment will also be evaluated. Other facility needs to be addressed include the actual need for a research and patrol vessel for the Sanctuary.

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Dawn Hayes, MBNMS	Scott Kathey, MBNMS

Timeline: October 2003 - April 2003

Outcomes and Products:

- Analysis of permit processing program with recommendations to increase efficiency while maintaining safeguards for proper protection of Sanctuary resources
- Identified minor modifications to Sanctuary boundaries and clarifying definitions of regulatory terminology.
- Develop guidelines for Sanctuary review of coastal development actions or planning decisions that may adversely and directly or indirectly impact the marine ecosystem.
- Operations plan identifying resource needs to implement all programs identified in the management plan

Issue Name: Big Sur Coastal Ecosystem Plan**Issue Description:**

Presently, there are several local, state and federal agencies producing new or revised management plans affecting the Big Sur Coast. Public groups and individuals have raised a concern that all these agencies will develop separate plans for pieces of the Big Sur coastal ecosystem, rather than a single plan that identifies the related roles and interconnectedness among agencies and components of the ecosystem. MBNMS will work to identify a framework for a comprehensive multi-agency “Big Sur Coastal Ecosystem Action Plan”, integrating resource protection, education and outreach, and research and monitoring activities specifically for the Big Sur Area. Overlapping jurisdictions, different agency mandates and limited resources necessitate the development of a relationship bringing together multiple agencies for the common purpose of ecosystem management.

Specific planning efforts underway or in the early stages of development include:

- MBNMS Management Plan Review
- Monterey County Local Coastal Program Update
- Monterey County General Plan Update
- Los Padres National Forest, Forest Plan Update
- Caltrans’ Big Sur Coast Highway Management Plan
- California Coastal National Monument Management Plan
- Point Sur & Pfeifer State Park General Plans

The long-term goal will be one ecosystem plan, identifying all agency responsibilities and programs with identified areas of common management mandates and opportunities for coordination.

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Bill Douros, MBNMS	Scott Kathey MBNMS
Monterey County	California Department of Fish and Game
California Department of Transportation	California State Parks
California Coastal Commission	
Bureau of Land Management – California Coastal National Monument	
U.S. Department of Agriculture – USFS Los Padres National Forest	
Public representatives from Big Sur Community	

Timeline: November 2001- March 2003

Outcomes and Products:

- Representatives from the appropriate agencies will develop a framework by which this plan can be developed after adoption and implementation of the management plan.
- Specific components of the plan should identify opportunities and strategies for multi-agency resource management coordination including:

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- Opportunities and strategies for coordinated coastal and marine resource education, research and monitoring programs.
 - Strategies to develop and implement a discrete Emergency Response Plan (addressing hazardous spills, vessel groundings, etc.) for the Big Sur Coast
 - Strategies to coordinate agency enforcement efforts
 - Strategies to address watershed level resource protection, research, and monitoring.
 - A program to address marine resource concerns related to Caltrans landslide disposal where deposition of material from landslides along the Sanctuary's steep coastline can bury intertidal and subtidal habitat.
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Issue Name: Coastal Development – Coastal Armoring

Issue Description:

With increases in development, additional pressures will come to install structures both to access the coast and to protect property from the ocean. These include infrastructure associated with harbors, breakwaters, and jetties as well as forms of coastal armoring. Development along the coast has increased the pressure to protect coastal structures with various types of coastal armoring to manage erosion such as seawalls, bulkheads and revetments. Coastal armoring can damage or alter local coastal habitats, deprive beaches of sand, lead to accelerated erosion of adjacent beaches, and hinder recreational access. The MBNMS currently prohibits alteration of the seabed and all armoring structures placed below the mean high tide line require authorization from the MBNMS. Until recently, MBNMS did not consider long-term impacts of seawalls in its authorization. In addition, many additional seawalls have been constructed with no notification to or authorization from MBNMS. Although the original designation document for the Sanctuary stated no new seawalls would be built, the Sanctuary has reviewed and authorized permits for seawalls, riprap or other coastal armoring projects at 16 sites since its designation, issuing specific conditions designed to minimize impacts of the construction process.

MBNMS staff has recently initiated a joint evaluation of coastal armoring with the California Coastal Commission, with the goals of developing a more proactive, comprehensive regional approach to the issue and improving the current case by case permit system and strengthen coordination between the Coastal Commission and the MBNMS on coastal armoring permits. If any seawalls are to be permitted in the future as part of this approach or any permit system, modifications to the designation documents to allow seawalls and the appropriate environmental review would have to occur as part of this management plan review.

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Working Group Participation:

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California Coastal Commission
U.S. Geological Service

Timeline: November 2002 – February 2003

Outcomes and Products:

- Resolve inconsistency between MBNMS designation document stating that no new seawalls would be constructed and the fact that MBNMS has permitted seawalls in the past.
- Develop framework to strengthen coordination between the agencies on coastal armoring permits.
- Identify planning subregions and guidelines where different levels of review would be necessary or critical areas where armoring would not be allowed.
- Integrate strategies for different regions of the MBNMS into the management plan.

Issue Name: Coastal Development – Harbors and Dredge Disposal**Issue Description:**

Periodic dredging of the local harbors is a necessary component of keeping the harbor channels clear and allowing access for all types of vessels. There are four major harbors within the MBNMS, three of which conduct regular dredging activity. The Sanctuary does not directly regulate the dredging itself, i.e. the removal of sediment from the harbors and their channels--that activity is exempt from MBNMS regulations--but does have a regulatory role in the offshore disposal of dredged materials. When the MBNMS was designated in 1992, two existing offshore sites for dredge disposal were identified, and the establishment of new sites was prohibited within its boundaries. Since then, MBNMS has recognized and authorized the use of two additional sites at Santa Cruz and Monterey Harbors, which were in use and permitted prior to designation. The Sanctuary reviews the composition of the sediment and any associated contaminants and authorizes dredged material disposal at these sites for clean sediments of the appropriate grain size and amounts. The Sanctuary works jointly with other state and federal agencies, such as the California Coastal Commission, the US Army Corps of Engineers, EPA, the Regional Water Quality Control Board, National Marine Fisheries Service, and US Fish and Wildlife Service to review and authorize dredge disposal within the MBNMS. These reviews minimize impacts to Sanctuary resources while allowing the continued operation of our critical local harbors. Sanctuary officials have allowed about 98% (by volume) of all dredge spoil proposed by local harbors for offshore disposal in the MBNMS since 1992.

The MBNMS will review its dredge disposal permit procedures and disposal locations as part of the Joint Management Plan Review. With input from harbor masters and other stakeholders, this review will focus examining methods for improved coordination with other agencies and efficient allocation of time and resources. The proposed reconstruction of a pier at Moss Landing may also require review of how the location of the pier affects an existing offshore dredge disposal site and whether that site remains a viable option.

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USFWS	NMFS	

Timeline: November 2002 – February 2003

Outcomes and Products:

- Review of the MBNMS dredge disposal permit process and identification of potential methods for increased efficiency and coordination.
 - Analyses of the need for new or modified dredge disposal locations and/or potential changes in volume
 - Recommendations on whether modifications to the regulations should be pursued.
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Issue Name: Coastal Development – Submerged Cables

Issue Description:

Installation of submerged cables in the MBNMS alters the seabed causing significant environmental impacts and potential hazards for fishing activities. Submerged cables may be used for commercial, defense or research related activities. MBNMS regulations currently prohibit alteration of the seabed but the Sanctuary does not have clear policy guidance in reviewing applications for installation of submerged cables that will be submitted in the future. Currently submerged cable applications are reviewed on a case by case basis however, up front policy guidance for future applicants would provide for a more efficient permitting process and inform future applicants as to preferred alternatives prior to submitting an application. As part of this process, MBNMS will develop a framework to identify sensitive areas of the seafloor within the Sanctuary and provide a clear policy structure with which to review future submerged cable development applications.

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Internal Team Participation:

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Timeline: January 2003 – March 2003

Outcomes and Products:

- Framework to develop nationwide guidelines on appropriate locations and restrictions for submerged cables.
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Issue Name: Ecosystem Protection – Benthic Habitats

Issue Description:

Bottom trawling is known to adversely impact the seafloor and benthic habitat, however there is a lack of knowledge about the extent of the impacts on marine resources and the potential need for protective action. There are currently some area closures in both the state and federal waters of the MBNMS. Recently additional closures related to the groundfish fishery resulted in additional, although partial, protections. The MBNMS will develop a framework to gather data on the types of trawling activities and their impacts to the seafloor, the benthic layer, and the

associated living marine resources other than the targeted species during trawling activities. MBNMS will examine impacts related to bottom trawling that may result in recommended protective measures to be implemented by the MBNMS or fishery management agencies.

Working Group Contact:

Huff McGonigal, MBNMS, Phone 831-647-4254, Email: huff.mcgonigal@noaa.gov

Working Group Participants

Erica Burton, MBNMS	MB SAC Research Seat
CDFG	MB SAC Fishing Seat
NMFS	MB SAC Conservation Seat

Timeline: November 2002 – March 2003

Outcomes and Products:

- Develop a framework for staff to examine impacts to benthic habitats from fishing gear generally associated with bottom trawling activities
- The framework would include the potential options for protective measures and the responsible agencies for regulation and enforcement.

Issue Name: Ecosystem Protection – Davidson Seamount**Issue Description:**

Located 80 miles south-west of Monterey, the Davidson Seamount is an impressive geologic feature with potentially significant resource management needs. Davidson Seamount is geologically young but has remarkable biological communities, including large, dense patches of sponges and apparently extremely old coral forests, with individuals commonly reaching more than 3 m in height. Rare species, such as the black-footed albatross and the federally listed endangered sperm whales, have been sighted at the seamount. Seamounts provide structure for animals to live on, and the structure creates oceanographic effects that promote the production of food. Many of these deep-sea animals, such as gorgonians, mushroom corals, and sponges, spend their entire lives permanently attached to rocks, and therefore depend on ocean currents to bring their food to them. A seamount, by rising from the seafloor, has strong currents that frequently run over it, providing the animals living along its flanks with a constant supply of planktonic food. These same currents also produce localized upwelling of water around the seamount. Nutrients like nitrates and phosphates, which are critical to the growth of phytoplankton, are then lifted from deepwater to the sunlit surface waters. These nutrients fuel a surge of planktonic plant and animal growth, and attract larger animals such as whales, sharks, tunas, and seabirds to a veritable feast. The settlement of larvae from distant geographical areas in addition to the other biological interactions make the Davidson Seamount a significant "hot spot" of biodiversity.

There has been long-term interest in Davidson Seamount as a unique geologic feature. In 2000, a Presidential announcement designated Davidson Seamount as an important site to launch a new era of U.S. undersea exploration. Recent advances in technology made possible a biological survey of the area in May 2002 led by MBNMS staff, and a preliminary assessment indicated the area is unique and deserves resource management consideration. Two commercial fisheries

currently operate in the waters above Davidson Seamount—drift gill netting for swordfish and sharks and trolling for albacore tuna. It is not known how or if these fisheries impact other species at the seamount. Its proximity to numerous fishing ports and the developing technologies in deep-water fishing make Davidson particularly vulnerable to increased fishing pressure.

The Monterey Bay National Marine Sanctuary will analyze the potential for including the Davidson Seamount as part of the sanctuary. The goal of the working group will be to review scientific analyses from the May 2002 characterization of the Seamount (species lists, species distribution and abundance, unique attributes of species), assess the needs and impacts of users of the Davidson Seamount area, determine current and potential threats to the habitat, and assess whether the area deserves the special protection status of a National Marine Sanctuary.

Working Group Contact:

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Working Group Participants:

Erica Burton, MBNMS

Sean Morton, MBNMS

William Douros, MBNMS

U.S. Navy

NMFS

Researchers working up data on seamount characterization

Albacore Fishermen and other key fishing interests

Seamount conservation interests

Timeline: January 2002 – April 2003

Outcomes and Products:

- Analysis and recommendation for potential increased protection of the Davidson Seamount via inclusion in the Monterey Bay National Marine Sanctuary.

Issue Name: Ecosystem Protection – Emerging Issues**Issue Description:**

The goals and objectives set forth by the National Marine Sanctuary Act (NMSA) direct each of the sanctuaries to take an ecosystem-based approach to managing the marine areas. The ecosystems include habitat structure, species assemblages and ecological processes, as well as humans and uses compatible with resource protection. MBNMS will actively pursue protection of the ecosystem and enhance biodiversity through its management strategies for program areas such as education, community outreach, monitoring, and research, and addressing human use activities through regulatory and non-regulatory strategies. MBNMS staff also recommends developing a mechanism or process to focus on long-term sustainability and look ahead to emerging resource protection issues, as crucial strategies towards the goal of resource protection.

Internal Team Contact:

Holly Price, MBNMS, 831-647-4247, holly.price@noaa.gov

Internal Team Participants:

Dawn Hayes, MBNMS

Andrew Devogelaere, MBNMS

Timeline: November 2002 – January 2003**Outcomes and Products:**

- Develop a framework for staff to work closely with local community and related agencies to ensure biodiversity protection and ecosystem conservation are top priorities.

Issue Name: Ecosystem Protection – Incorporate Fishing Issues into Education and Research Plans**Issue Description:**

Fishing in the Monterey Bay National Marine Sanctuary is part of the region's cultural and economic history and also has an impact on the health of the Sanctuary's ecosystem. Several issues were raised during the scoping meetings regarding the need for the Sanctuary to better educate the public about both the positive and negative aspects of commercial and recreational fishing in the Sanctuary. This includes providing information about the health and trends of fish stocks in the Sanctuary as well as providing information about the history of fishing in the Central Coast. This would also involve the need for the Sanctuary to conduct more research into the fisheries and changing populations and to integrate the fishing community into the gathering of data that is used for fishery related decisions.

To address this issue, the MBNMS would develop a program that would seek to educate the public about fishing issues in the Sanctuary. The MBNMS will also develop strategies for involving the fisherman in research activities and develop methods of using the fishing community's knowledge of fish stocks to add to the body of research available for fishery related decision making processes.

Working Group Contact:Erica Burton, MBNMS, Phone: 647-4246, Email: erica.burton@noaa.gov**Working Group Participants:**

Holly Price, MBNMS

Dawn Hayes, MBNMS

Andrew Devogelaere, MBNMS

Timeline: January 2003 – April 2003**Outcomes and Products:**

- Outline a program to incorporate fishing related activities into the research and education plans for the MBNMS.

Issue Name: Ecosystem Protection – Krill Harvesting**Issue Description:**

Krill is a critical component of the marine ecosystem and is fundamental to the trophic structure of the marine life within the sanctuary. Krill is currently not harvested within the sanctuary, however the potential exists for this fishery to develop in the future. At this time, krill may not be harvested within state waters or landed within the State of California. However, the federal waters in the sanctuary may soon be open to fish farming, outside the reach of state governments. NMFS is currently soliciting comments on their proposed Code of Conduct for Offshore Aquaculture, which could place net pens in areas of the sanctuary. This code was generated pursuant to the Department of Commerce's stated goal of a five hundred percent increase in the nation's aquaculture by the year 2025. These net pen raised fish will likely demand krill as feed stock. This may further increase the likelihood of a krill fishery developing within Sanctuary waters.

The oceanographic and bathymetric features of the MBNMS make it uniquely susceptible to the adverse effects of krill fishing. The Monterey submarine canyon provides krill with a distinctive habitat that contributes to their abundance and degree of aggregation. This makes the waters within the sanctuary a critical feeding ground for countless forms of wildlife. These include predators like the blue whale, dense concentrations of seabirds, and commercially important fish such as salmon and recovering species of rockfish. The canyon habitat provides opportunity for high night time surface feeding due to its location downstream from an upwelling center, a refuge from daytime predation as krill can migrate to depths in excess of 100m in the canyon, and reduced swimming energy output during daytime schooling at depth due to reduced canyon slope currents.

In the Antarctic krill fishery, managers have found that localized krill mortality from fishing may be too high to support predators with restricted foraging ranges, or may cause a shift in the behavior and distribution of more widely ranging species. The timing of the krill fishery during months exacerbates this concern since many species of breeding bird and seal predators are dependent on the resource. In the MBNMS, a fishery would correspond to the times of peak blue whale abundance and could interfere with both the feeding behavior of the whales, the whale watching industry, and tourism in general. A krill fishery could adversely impact commercial and recreational fisheries of all kinds as most target species are directly or indirectly dependent on the resource.

To address this issue, MBNMS will explore the potential for the future harvest of krill, outline the current regulatory framework, and potentially recommend permanent restrictions in the Sanctuary.

Working Group Contact:

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Working Group Participation:

MBNMS Research Team
Baldo Marinovic, UCSC
MB SAC Fishing Seat

NMFS
Bill Sydeman, PRBO
MB SAC Conservation Seat

Timeline: January 2003 – March 2003

Outcomes and Products:

- Identify potential for krill harvesting in the Sanctuary
- Recommendations for pursuit of potential permanent restriction of krill harvesting in MBNMS

Issue Name: Ecosystem Protection – Marine Reserves

Issue Description:

Sanctuaries are mandated to protect living marine resources, habitats and biodiversity. Public debates on the value of marine reserves to protect living marine resources have increased in the past few years. The issue of marine reserves within MBNMS received the most attention during the public scoping process. Fully 67% or the 12,000 comments received by the MBNMS either asked MBNMS to designate marine reserves, or asked the MBNMS to only address the issue with the support of the fishermen and via existing fishery management agencies. Measures to protect a sanctuary ecosystem need to include all necessary strategies including the designation of marine reserves where the resources are fully protected.

The State of California is currently examining the implementation of a network of marine reserves under the implementation of the Marine Life Protection Act (MLPA). There is currently no examination of marine reserves in the federal waters of the Sanctuary that comprise approximately 80% of the MBNMS responsibility.

The MBNMS is currently represented on two of the MLPA regional working groups to provide input to the California Department of Fish and Game on designing and siting of marine reserves in the state waters of the Sanctuary. The MBNMS has also been working closely for over a year with the Alliance of Communities for Sustainable Fisheries to gather input from the fishing community in forming recommendations on marine reserve issues.

To address the issue of properly protecting the Sanctuary's marine ecosystem via marine reserves, the MBNMS will outline the framework for providing input to CDFG on the implementation of MLPA and evaluating the success of their effort and potential need for further action. The MBNMS will also develop a framework to address the need for, and if necessary, location, and type of marine reserves in the federal waters of the Sanctuary. The MBNMS will work closely with fisherman and other interested parties, and state and federal fishery managers to implement the marine reserves.

Working Group Contact:

Holly Price, MBNMS, Phone: 831-647-4247, Email: holly.price@noaa.gov

Working Group Participation:

Huff McGonigal, MBNMS
Erica Burton, MBNMS
CDFG
NMFS

Dawn Hayes, MBNMS
MB SAC Research Seat
MB SAC Fishing Seat
MB SAC Conservation Seat

PFMC	MB SAC Diving Seat
Alliance of Communities for Sustainable Fisheries	
Charles Wahle, MPA Center	Bill Sydeman, PRBO

Timeline: November 2002 – March 2003

Outcomes and Products:

- Outline the framework for the MBNMS to provide input into the MLPA process establishing a network of marine reserves in the state waters of the MBNMS and evaluate its success.
- Develop a framework for the MBNMS and its partners to determine the need for, and if necessary, describe a network of marine reserves in federal waters.

Issue Name: Exotic Species

Issue Description:

Invasions by non-native aquatic species are increasingly common worldwide in coastal habitats. Estuaries, in particular, harbor large numbers of introduced species. For example, there are about 250 known invasive species in the San Francisco Bay and Delta. Within Sanctuary waters, there are approximately 60 invasive species in Elkhorn Slough, and another small handful of species recently reported in nearshore coastal waters. The effects of introduced aquatic species on habitats they colonize is often unknown, however, some clearly have had serious negative influences. Impacts often include decreasing abundance and even local extinction of native species, alteration of habitat structure, and extensive economic costs due to biofouling. Probably the most important mechanism for the introduction of aquatic species is transport in ship ballast tanks, though other mechanisms such as introduction through improper disposal of aquarium materials, bait and seafood packing materials, aquaculture operations, and research activities can contribute to the issue.

While known to be a growing problem there has not been a systematic survey of nearshore coastal waters to evaluate the level of invasive species present. Eradication of introduced species is difficult and often impossible, and management practices focus largely on prevention of introductions. The Sanctuary has conducted some limited research and education on this issue and occasionally reviewed and provided comments to other agencies on ways to prevent introductions.

This issue received considerable public input and was highly ranked by the Advisory Council, however the MBNMS lacks resources to address the issue at this time. Consistent with regulatory measures in other National Marine Sanctuaries, the MBNMS will use the management plan review to prohibit the discharge of exotic species into the Sanctuary, however a comprehensive action plan and strategies to address this issue will be developed in the future.

Issue Name: Interpretive Facilities

Issue Description: Comments by the public and the SAC suggested an important issue facing the Sanctuary was a lack of awareness of the resource issues facing our local oceans. Facilities

for education, research, and outreach provide a critical vehicle for interaction and developing a sense of stewardship with the constituent base of the MBNMS. The original 1992 management plan for the MBNMS included an expectation that visitor center(s) would be developed along the Sanctuary's shoreline. Progress on this issue was finally made in the past year with the commencement of a Feasibility Study to evaluate possibly siting a visitor center, developed with partners, at one of 3 possible sites around Monterey Bay.

The MBNMS will develop strategies to provide for the development of an MBNMS Visitors Center and Regional Interpretive Centers using the recommendations from the Feasibility Study. This will be completed around January and work on an action plan for development will begin at that time. The MBNMS will also identify necessary signage and interpretive center needs throughout the sanctuary.

Internal Team Contact:

Dawn Hayes, MBNMS, 831-647-4256, dawn.hayes@noaa.gov

Internal Team Participation:

Michele Roest, MBNMS

Jen Jolly, MBNMS

Timeline: January 2003 – April 2003

Outcomes and Products:

- Action Plan to develop a MBNMS Visitor Center in the Monterey Bay area
- Sanctuary-wide program identifying necessary resources and location for appropriate signage, kiosks, and interpretive centers

Issue Name: Multicultural Outreach - MERITO**Issue Description:**

MBNMS has recently developed an action plan for multicultural outreach named the MERITO (Multicultural Education for Resource Issues Threatening Oceans) plan. MERITO was developed in partnership with local Latino communities to provide expanded bilingual outreach and education about marine and coastal environments and their conservation to students, teachers, adults and families. MERITO, (Spanish meaning is “merit” or “worth”) includes three specific areas of focus: community-based outreach, site-based outreach, and teacher professional development and college internships.

This program, while developed, has not been fully implemented. Currently, California State Parks, Elkhorn Slough National Estuarine Research Reserve and the MBNMS have teamed up to launch a first stage pilot program for the site-based outreach component. Multicultural outreach strategies specifically for the MBNMS will focus on implementing the MERITO plan and incorporating MERITO into the management plan.

The long-term goal of this action plan will be full implementation of all three main components of the MERITO plan, as well as integration of the program into the overall MBNMS education

plan. The Spanish language component is the first of a series of multicultural education and outreach plans that will eventually target other diverse communities. Ultimately, MERITO will be exported to other sanctuaries as a model multicultural education and outreach program.

Implementation of the existing MERITO framework will result in the development and delivery of Spanish language bilingual outreach programs, materials, and products addressing why ocean protection is a role all coastal citizens share, and how Latino families take action in their own lives to protect coastal and watershed areas. Delivery will occur through field trips and classroom outreach for K-12 schools, training and resources for youth leaders of after school programs, internships and scholarships for Latino college students, professional development for Latino-serving teachers, and special events and projects for migrant families.

Internal Team Contact:

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Team Participation:

Michele Templeton, MBNMS

Dawn Hayes, MBNMS

Timeline: December 2002 – January 2003

Outcomes and Products:

- Implementation of the MERITO program and integration into the MBNMS Management Plan

Issue Name: Water Quality – Beach Closures and Coliform Contamination

Many of the Sanctuary's beaches are regularly closed or posted by county health departments as showing elevated levels of contamination from coliform bacteria. These beach closures or postings have obvious impacts on recreation, including surfing, diving and swimming, as well as impacts on tourism and aquaculture operations. Pathogens in human sewage may cause health impacts for those who come in contact with the contaminated water, including the spread of diseases, ear infections, nausea, and rashes. Recognized clogs and spills into the Sanctuary, which are prohibited by current Sanctuary regulations, can occur due to aging undersized and cracked infrastructure and to inappropriate contributions to the sanitary system, such as foam, diapers and grease. Leaching, illicit connections, cross-contamination between sanitary and storm drain systems, and septic tanks can also regularly contribute to high beach coliform levels. Some contamination may also be due to wildlife such as marine mammals and birds, pet droppings, and small livestock facilities.

To date, the Sanctuary's involvement in this issue has included working with the cities on addressing urban runoff, including coliform contamination, and investigating and jointly pursuing potential funding opportunities for local communities to better identify sources of coliform contamination and improve infrastructure systems. The expanding amount and regularity of sewage spills into the MBNMS, as well as the regular beach closures due to unknown sources of coliform make regional resolution of this issue a top priority. The MBNMS

will work with local communities to develop a framework to address the issue through identifying sources of contamination and remediation measures.

Working Group Contact:

MBNMS WQPP Director (vacant)

Working Group Participation:

Holly Price, MBNMS

Huff McGonigal, MBNMS

WQPP Committee

County Health Departments

MB SAC CalEPA Seat

Lisa Emanuelson, MBNMS

Coastal Municipal Public Works Depts.

Timeline: January 2003 – April 2003

Outcomes and Products:

- Summary of extent and sources of beach coliform contamination in Sanctuary.
- Framework to develop beach closure/coliform program addressing infrastructure, monitoring, education, and enforcement needs.

Issue Name: Water Quality – Desalination**Issue Description:**

Three desalination facilities currently operate within the boundaries of the Sanctuary, however there has recently been an increase in proposals for both private and public desalination plants. Currently there are an additional 12 facilities in the Sanctuary region that are in some stage of initial consideration or planning. Due to population growth in the area, continuing shortages and degradation of conventional water supplies, and advances in desalination technology, the trend will likely continue. Desalination plants have the potential to negatively impact the marine environment through the introduction of brine waste effluent and other substances to Sanctuary waters. Additionally, the construction of desalination facilities and associated pipelines often causes alteration of the seabed. MBNMS will work with various stakeholders in the development and implementation of regional desalination guidelines and recommendations.

The long-term goal will be to minimize impacts to Sanctuary resources and qualities stemming from desalination activities, and allow the Sanctuary to address desalination more comprehensively through the development of a series of regional guidelines and recommendations. The guidelines and recommendations will be aimed at parties seeking permits, considering, or proposing to build a desalination plant. The action plan will include specific strategies aimed at minimizing impacts, and will address siting concerns, establish guidelines for monitoring practices, and identify engineering, design and operation aspects reducing impacts. The plan will recommend ways to reduce the proliferation of multiple small plants and encouraging the use of existing regional facilities where the brine discharge could be diluted. Additionally, the action plan will include strategies for education and outreach of stakeholders.

Working Group Contact:

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Working Group Participation:

Holly Price, MBNMS
Lisa Emanuelson, MBNMS
California Coastal Commission
Central Coast Regional Water Quality Control Board

Timeline: November 2002 – February 2003

Outcomes and Products:

- Strategies to minimize the impacts of desalination on Sanctuary resources and qualities
- Regional guidelines and recommendations for desalination plant proponents
- Education and outreach plan to facilitate the provision of relevant information to interested parties

Issue Name: Water Quality – Memorandum of Agreement Revision**Issue Description:**

The MBNMS developed a Water Quality Management Memorandum of Agreement (MOA) with key agencies as part of the 1992 Management Plan. This MOA provided an ecosystem based water quality management process that integrated the mandates and expertise of existing coastal and ocean resource managers to protect the resources, qualities, and compatible uses of the Sanctuary. This MOA outlines agency roles and responsibilities, procedures for decision-making, agreements for coordination of management research and monitoring efforts. Numerous activities have taken place since 1992 which need to be reflected in the MOA, such as development of four WQPP plans, the state's nonpoint source control program, etc.

Working Group Contact:

MBNMS WQPP Director (vacant)

Working Group Participation:

Holly Price, MBNMS
U.S. Environmental Protection Agency
California Coastal Commission
MB SAC Cal EPA Seat
Central Coast Regional Water Quality Control Board
San Francisco Bay Regional Water Quality Control Board
State Water Resources Control Board
Association of Monterey Bay Area Governments
WQPP Committee

Timeline: November 2002 – April 2003

Outcomes and Products:

- Updated MOA that reflects developed and future WQPP plans and other new interagency programs.

Issue Name: Water Quality – Riparian and Coastal Wetlands

Issue Description: Wetlands and riparian corridors adjacent to the sanctuary suffer from degradation due to over development, invasive species, pollution and erosion. While this issue received considerable public input and was highly ranked by the Advisory Council, the MBNMS lacks resources to address the issue now. A framework and strategies to address this issue will be developed in the future, and implemented as part of a comprehensive water quality program. At this time due to lack of resources, this program will be deferred, however MBNMS will develop a conceptual framework and schedule as part of the draft management plan.

Issue Name: Water Quality – WQPP Implementation

Issue Description: Water quality issues occurring in the Sanctuary's watersheds include contaminants such as nitrates, sediment, persistent pesticides, oil and grease, detergents, metals and coliform bacteria. The Sanctuary's Water Quality Protection Program (WQPP) committee has developed multistakeholder plans for urban runoff, marinas and boating, agriculture and rural lands, and regional water quality monitoring. The plans are being partially implemented through pooling of existing staff from various agencies and groups, grant funding, and volunteers.

A regional monitoring plan is underway to coordinate and expand water quality data, with the state's Regional Water Quality Control Board leading development of government data on the Central Coast, and the Sanctuary and nonprofit groups leading the coordination and synthesis of volunteer monitoring data. Implementation of the urban runoff plan has involved development of a Model Urban Runoff Program which is being implemented with the California Coastal Commission and three cities, including local ordinance revisions, municipal best management practices, illicit discharge detection programs, technical training workshops and extensive education and outreach efforts. Implementation of the marinas and harbors plan has included working with local harbormasters and environmental organizations on the siting of pump out facilities for oily bilge water in three local harbors, technical trainings for harbor staff, and educational outreach to boaters.

The largest and most recent plan addresses polluted runoff from over 4000 square miles of agriculture and rural lands. It includes a unique agreement with the Farm Bureaus representing the region's extensive agricultural community to establish industry-led networks to improve soil, nitrate and pesticide management practices. Initial implementation of this regional plan has included establishment of farmer-led erosion and nitrate control projects in seven watersheds in located in six counties. The effort has also generated substantial additional funding from the USDA to our partners, the Natural Resources Conservation Service, the University of California Cooperative Extension, and local Resource Conservation Districts, which has brought on a team of experts to help carry out the plan and conduct technical outreach to farmers on conservation measures.

Although significant gains have been made in implementing the plans, a large number of strategies have not yet begun implementation, or implementation has only been accomplished in a limited geographic area. Addressing this issue will require reviewing which strategies have not

yet been begun or are not fully implemented, and developing ways to address barriers to implementation including interagency staffing, funding and coordination needs. It should also include a more formal ongoing tracking system for evaluation of successes of and barriers to implementation by the multiple agencies, public and private partners involved in carrying out the plan. The completed plans and this updated analysis need to be incorporated into the new management plan.

Working Group Contact:

MBNMS WQPP Director (vacant position)

Working Group Participation:

Holly Price, MBNMS Andrew Devogelaere, MBNMS
Lisa Emanuelson, MBNMS MB SAC CalEPA Seat
WQPP committee (25 agencies, public and private groups)

Timeline: January 2003 – March 2003

Outcomes and Products:

- Strategies to complete an assessment of the progress of the WQPP to date
- Strategies to fully implement all elements of existing water quality plans.
- Incorporation of the WQPP plans into the management plan

Issue Name: Wildlife Disturbance – Marine Mammals and Seabirds

Issue Description: The Sanctuary provides many opportunities for wildlife viewing, including whale watching, bird watching, observation of pinniped pupping and haulout activities, and tidepooling. With the multitude of opportunities for observing and interacting with nature comes the potential for wildlife disturbance which may result in impacts on marine resources such as: flushing of birds from nesting sites, pinnipeds abandoning pups, potential harassment or even death to wildlife. MBNMS currently addresses some of these issues through regulatory measures such as prohibitions of white shark attraction and marine mammal and seabird harassment, and over-flight restrictions for sensitive areas; and non-regulatory measures such as the TEAM OCEAN kayaker interpretive enforcement program, and other education and outreach efforts to minimize impacts to living marine resources. Potential impacts from low-flying aircraft are addressed by a specific prohibition on flying under 1000 feet in designated overflight zones with sensitive wildlife. Some implementation problems have occurred due to pilot's lack of understanding and acknowledgement of the zones since they are not noted on aeronautical charts. MBNMS has begun an outreach campaign to pilot's associations on the zones and the impacts of low flights, and is working to include notations on the charts.

Major disturbances to marine mammals and seabirds continue to be a major issue within the MBNMS. To address this issue, MBNMS will develop a framework to review the current wildlife disturbance protective measures such as the aircraft overflight zones and to develop protective measures for potential impacts from wildlife viewing activities such as whale watching or wildlife viewing from non commercial vehicles. The framework will include

development of viewing guidelines, educational and outreach strategies, and enforcement measures.

Working Group Contact:

Deirdre Hall, MBNMS, Phone: 831-647-4207, email: deirdre.hall@noaa.gov

Working Group Participation:

Huff McGonigal, MBNMS	MB SAC Conservation Seat
Jen Jolly, MBNMS	MB SAC Recreation Seat
USFWS	Kayak Rental Operators
NMFS	Whale Watching Operation
CDFG	Pilot Organization
BLM	Ecotourism Industry

Timeline: November 2002 – April 2003

Outcomes and Products:

- Framework to develop protective measures for human interactions with marine mammals and seabirds through wildlife viewing and aircraft overflights in the sanctuary.

Issue Name: Wildlife Disturbance – Motorized Personal Watercraft**Issue Description:**

Motorized personal watercraft (MPWC), operate in a manner unique among recreational vehicles creating potentially significant impacts on wildlife, water quality and personal safety. In addition to impacting marine resources, there have been conflicts between MPWC users and other recreational ocean users as a result of the noise and operation of MPWCs. This issue was raised during scoping meetings recognizing that the current regulations do not address the changes in MPWC technology and size during the last ten years.

Currently, MBNMS regulations include a partial ban on MPWC. The sanctuary originally restricted MPWCs to certain zones in order to protect Sanctuary resources, in particular marine mammals and seabirds, and defined MPWC specifically. Review of MPWC regulations will be necessary, as many recent designs of personal watercraft are not covered by the Sanctuary's 1992 definition of such craft, which envisioned vehicles carrying only one or two passengers. Related issues include evaluating the need for some or all zones, and the buoy system to demark zones, and the need for effective enforcement and education on the zones to reduce conflicts.

Working Group Contact:

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Working Group Participation:

Sean Morton, MBNMS	Jen Jolly, MBNMS
MB SAC Recreation Seat	MB SAC Harbor Seat
Surfing Representation	MPWC User Representation

Timeline: November 2002 – April 2003

Outcomes and Products:

- Revision of MPWC definition
 - Identify allowed uses of MPWC within the MBNMS and need for some or all of existing MPWC zones, and the buoy demarcation system
 - Program for effective enforcement and education on the allowable (or prohibited) MPWC uses
-

Issue Name: Wildlife Disturbance – Tidepools**Issue Description:**

The MBNMS currently lacks an overall strategy to address impacts to tidepools from human disturbance. Removal of living and nonliving tidepool resources continues to occur in areas of high traffic. During scoping meetings, the public raised concerns about disturbance to the tidepools in many different areas of the Sanctuary including Pacific Grove, Monterey, Big Sur (Pfeifer Beach), and Fitzgerald Marine Reserve. Concerns included trampling of the resources and removal of certain intertidal species or shells that can provide habitat.

In response to public concern about the degradation of tidepool habitats in Pacific Grove, a citizen based Point Pinos Tidepool Task Force was established, in which the Sanctuary participates. This group is focused on improving public awareness about tidepool conservation through both signage and on-site volunteer interpreters; and conducting research about the role of human impact in changes that occur in rocky intertidal communities. The Sanctuary currently has several educational signs placed throughout tidepool access areas in Pacific Grove. The signs provide information about tidepools, and proper etiquette, aimed at reducing impacts to the heavily visited locations.

Other areas of the Sanctuary do not have significant monitoring and enforcement, signage or educational outreach strategies. To address this issue the MBNMS will develop a framework to work with local communities to develop guidelines and comprehensive educational and outreach strategies.

Working Group Contact:

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Working Group Participation:

Huff McGonigal, MBNMS	Andrew Devogelaere, MBNMS
Steve Lonhart, MBNMS	Liz Love, MBNMS
MB SAC Research Rep	CDFG
Local Cities and Counties	California Coastal Commission
Point Pinos Tidepool Task Force	Community Organizations
Conservation Groups	

Timeline: November 2002 – April 2003

Outcomes and Products:

- Framework to develop tidepool interaction guidelines, education, outreach programs